Books

REVIEWS

The Technology of the Tetracyclines. Biochemical Reference Series Volume 1. Edited by R. C. EVANS. Quadrangle Press, P.O. Box 4267, Grand Central Station, New York, NY 10017, 1968. vii + 617 pp. 21 × 27 cm. Price $35.00.

This volume is a compilation of the manufacture and production processes of the five tetracyclines marketed in 1967; chlorotetracycline, oxytetracycline, tetracycline, demethyltetracycline, and methacycline.

The material is presented in six chapters, one for each of the five tetracyclines cited and a sixth devoted to a discussion of the Cosynethetic Factor (a substance which has the property of significantly enhancing the production by fermentation of the tetracyclines). Within each chapter the material is arranged in the following order: (*a*) Strain Selection and Characterization; (*b*) Inocula Production; (*c*) Fermentation; (*d*) Recovery and Purification; (*e*) Assay; and (*f*) Physical and Chemical Properties. In addition to the physical and chemical properties, bacteriological data of these tetracyclines are also included. These properties and data should be especially useful for identification purposes.

The source of the material presented in this volume is taken from U. S. and British patents. All patents referred to in the text are consecutively numbered for reference notation in the order of issue date and are found in the Table of Patents. Each Recovery and Purification process is summarized in its own flow sheet providing a quick and convenient key to that disclosure.

In summary this volume is ideally suited as an excellent reference for the mycologist, bacteriologist, biochemist, chemical engineer, and those scientists engaged in the manufacture and production of tetracyclines.

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Combined Effects of Alcohol and Other Drugs. Edited by ROBERT B. FORNEY and FRANCIS W. HUGHES. Charles C Thomas, 302–327 East Lawrence Ave., Springfield, Ill., 1968. v + 124 pp. 15.5 × 23.5 cm. Price $6.50.

The Director of the State Department of Toxicology and the Professor of Pharmacology of Indiana University Medical School, have given us a helpful book. Many people use alcoholic beverages regularly, while at the same time taking various drugs, some commonplace such as aspirin, and others which may have been prescribed for them by physicians. It is important to know how alcohol may modify expected drug action. In general it will enhance the effects of depressant drugs, and tend to reduce the effect of brain-stimulating drugs.

This little monograph opens with a sharp discussion of the general pharmacological effects of alcohol. In addition to its progressive depression of the central nervous system, depending on the concentration reached therein, alcohol dilates peripheral blood vessels. If its ingestion is abused it may cause local irritation of the gastric mucosa. Since it may also have a mild diuretic action, it can modify the activity of many types of drugs.

The problem of the action of alcohol in combination with brain-depressant drugs is well-analyzed, with much detail on the actions of various depressants. There is disagreement as to whether or not there is superadditive effect. There seems to be slight evidence that there may be, except for diphenylmethanes. There are 86 references to this section.

There seems to be little sound evidence that caffeine antagonizes alcoholic depression. Again it is not clear that the amphetamines antagonize alcohol. On the other hand alcohol increases side effects of monoamine oxidase inhibitors, such as nialamide, and there may be unexpected potentiation of depression. Some 33 references are given to support these conclusions.

It is interesting that ethanol can function as a specific antidote in methanol and ethylene glycol poisoning. This results from competitive inhibition of enzymes which will slow the formation of toxic metabolites, formaldehyde, and oxalic acid, respectively. Alcohol also interferes with the action of anticoagulants, so that regulation of anticoagulant therapy is difficult. Again, alcohol with oral hypoglycemic drugs results in adverse effects, probably by interference with the metabolism of alcohol, so that acetaldehyde tends to accumulate, with resulting flushing and headache. The depressant effect of antihistaminics seems to be enhanced by alcohol. Some 65 references indicate the wide variety of untoward effects of alcohol when taken with a remarkable range of different antibiotics. As the authors indicate, it is surprising, in view of the extensive use of alcoholic beverages that so little experimental or clinical study has been made of possible interactions with all frequently used drugs. An interesting short note concerns laws regarding alcohol-drug combinations. Such laws, involving automobile drivers, exist in California, Iowa, and Minnesota.

This is a short but well-prepared book. It has easy-to-use author and subject indices, and helpful references.

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